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ALCOHOLISM, ABUSE AND DEPENDENCE

Abuse, Dependence & Alcoholism

- Substance use disorders are a major problem facing many countries
- The most common substance of abuse dependence in patients presenting for rx is alcohol
- The estimates that about 140 millions people throughout the world suffer from alcohol dependence
- The term 'alcoholism' describes the systemic adverse effects of alcohol
- Alcoholism refers to any condition that results in the continued consumption of alcoholic beverages despite health problems and negative social consequences
- Modern medical definitions describes alcoholism as a disease and addiction which results in a persistent use of alcohol despite negative consequences
- Alcoholism was also referred to as dipsomania; described as preoccupation with or compulsion toward the consumption of alcohol and or an impaired ability to recognize the negative effects of excessive alcohol consumption
- The journal of the American Medical Association defines alcoholism as “a primary, chronic disease characterized by impaired control over drinking, preoccupation with the drug, use of alcohol despite adverse consequences, and distortion in thinking.”
- The DSM-IV (the standard for diagnosis in psychiatry and psychology) defines alcoholism as repeated use despite recurrent adverse consequences
- It further defines it as alcohol abuse combined with tolerance, withdrawal and uncontrollable drive to drink

Alcohol abusers:

- or problem drinkers, are people who drink too much on a regular basis. The alcohol use is self-destructive or can present a danger to others, but they still demonstrate some ability to set limits and establish some measure of control over their drinking. While some people are able to maintain this pattern for long amount of time, alcohol abusers are at risk for progressing to alcoholism
- A minority opinion within the field, argue against the existence of alcoholism as a disease. Critics of the disease model tend to use the term 'heavy drinking' when discussing the negative effects of alcohol consumption
- it's estimated that 9% of the general population is pre-disposed to alcoholism based on genetic factors
- the quantity, frequency and regularity of alcohol consumption required to develop alcoholism varies greatly from person to person.
- Some risk factors including social environment stress, environmental health, genetic

predisposition, age, and gender have been identified

- those who consume alcohol at an early age, by age 16 or younger, are at a higher risk of alcohol dependence or abuse
- the proportion of men with alcohol dependence are higher than that of women. 7% and 2.5% respectively
- Current evidence indicates that in both men and women, alcoholism is 50-60% genetically determined, leaving 40-50% for environmental influences.

ALCOHOLISM SCREENING

- several tools may be used to detect a loss of control of alcohol use
- these tools are mostly self report in questionnaire forms
- another common theme is a score or tally that sums up the general severity of alcohol use
- the Cage questionnaire, has 4 questions
 - two 'yes' responses indicates that the respondent should be investigated further. The questionnaire asks the following question;
 - i. have you ever felt you needed to **C**ut down on your drinking?
 - ii. Have people **A**nnoyed you by criticizing your drinking?
 - iii. Have you ever felt **G**uilty about drinking?
 - iv. Have you ever felt you needed a drink first thing in the morning (**E**ye- opener) to steady your nerves or to get rid of a hangover?
- the CAGE questionnaire among others has been extensively validated for use in identifying alcoholism. It is not valid for diagnosis of other substances use disorders; although somewhat modified versions of the CAGE are frequently implemented for such a purpose.
- the alcohol dependent data questionnaire is a more sensitive diagnostic test than the CAGE test. It helps distinguish a diagnosis of alcohol dependence from one of heavy alcohol use.
- The Michigan Alcohol Screening Test (MAST) is a screening tool for alcoholism widely used by courts to determine the appropriate sentencing for people convicted of alcohol-related offenses e.g driving under the influence, public disorder e.t.c
- The Alcohol Use Disorder Identification Test (AUDIT) is a screening questionnaire developed by the WHO. This tests is unique in that it has been validated in six countries and is used internationally
- The Paddington Alcohol Test (PAT) was designed to screen for alcohol related problems amongst those attending accident and emergency departments

GENETIC PREDISPOSITION TESTING

- human dopamine receptor genes have a detectable variation referred to as the DRD2 TaqI polymorphism
- those who possess the variation of this polymorphism have a small but significant tendency towards addiction to opiates and endorphin releasing drugs like alcohol.

URINE & BLOOD TESTS

- macrocytosis
- elevated gamma GT
- moderate elevation of AST and ALT and an AST:ALT ratio of 2:1
- High CHO deficient transferrin (CDT)
- However none of these tests are specific for alcohol

EFFECTS OF LONG TERM ALCOHOL MISUSE

- alcoholics have a very high suicide rate and studies show between 8% and 21% of alcoholics commit suicide
- the risk of suicide among alcoholics has been determined to be 5,080 times that of the general public
- the physical health effects associated with alcohol consumption cirrhosis of the liver, pancreatitis, epilepsy, polyneuropathy, alcoholic dementia, heart dx, increased chances of cancer, nutritional deficiencies, sexual dysfunction and death from many sources.
- Psychiatric disorders are common in alcoholics, especially anxiety and depression disorders, with as many as 25% of alcoholics presenting with severe psychiatric disturbances
- typically they worsen during alcohol withdrawal but with abstinence these psychiatric symptoms typically gradually improve or disappear.
- The social problems arising from alcoholism are caused in part due to the serious pathological changes induced in the brain from prolonged alcohol misuse and partly because of the intoxicating effects of alcohol and includes:
 - loss of employment
 - legal consequences such as drunk driving or public disorders
 - marital conflicts & divorce

ALCOHOL WITHDRAWAL

- alcohol withdrawal differs significantly from most other drugs in that it can be directly fatal
- alcohol's primary effect is the increase in the stimulation of the GABA (gamma amino butyric acid) receptor, promoting CNS depression
- With repeated heavy consumption of alcohol, these receptors are desensitized and reduced in number, resulting in tolerance and physical dependence
- When alcohol is stopped, especially abruptly, the person's nervous system suffers from uncontrolled synapse firing. This can result in symptoms that include anxiety, life threatening seizures, delirium, tremors, hallucinations, shakes and possible heart failure
- Acute withdrawal symptoms subside after 1-3 weeks
- Less severe symptoms e.g insomnia & anxiety may continue as part of a post withdrawal syndrome

TREATMENT

- most treatments focus on helping people discontinue their alcohol intake, followed up with life training and/or social support in order to help them resist a return to alcohol use
- since alcoholism involves multiple factors which encourage a person to continue drinking , wthy must all be addressed in order to successfully treat them

Detoxification

- or 'detox' for alcoholics is an abrupt stop of alcohol drinking coupled with the substitution with drugs that have similar effects to prevent alcohol withdrawal

Group therapy and psychotherapy

- after detoxification, various forms of group therapy or psychotherapy can be used to deal with underlying psychological issues that lead to alcohol consumption and provide relapse prevention skills

Rationing and moderation

- Rationing & moderation programs such as moderation management & Drink-wise

Medications

- disulfiram